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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/213,581	12/17/1998	IHOR LYS	CKC-012.07	6707
23628	7590	10/27/2003	EXAMINER	
WOLF GREENFIELD & SACKS, PC FEDERAL RESERVE PLAZA 600 ATLANTIC AVENUE BOSTON, MA 02210-2211			LEE, WILSON	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 10/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/213,581

Applicant(s)

LYS ET AL.

Examiner

Wilson Lee

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2,8-26,41,42,45-48,50-54 and 56-76 is/are pending in the application.
- 4a) Of the above claim(s) 8-14,41,42,45-48,50,61-67 and 69-72 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 75 and 76 is/are allowed.
- 6) ☒ Claim(s) 1,2,15-26,51-54,56-60,68,73 and 74 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **El ction**

Applicant elects Group 1, Species 3 with traverse.

### **Response to Arguments**

Applicant pointed out that examiner did not identify claims 58-60 and 73 whether they are classified as a generic, an identified species or another unidentified species. Claims 58-60 and 73 were inadvertently left out. In order to expedite the application onto prosecution, claims 58-60 and 73 are grouped into the elected Species 3 for examination instead of providing another supplemental office action of a new restriction requirement.

Applicant alleged that Invention V was improperly restricted out and is not distinct from Group I. The argument is found persuasive. Therefore Invention V (51-54, 56 and 57. Claim 55 was canceled by applicant) is now grouped into the elected Group 1 for examination instead of providing another supplemental office action of a new restriction requirement.

Applicant alleged that Examiner has conceded that search and examination of these claims can be made without a serious burden because the five prior Office Actions were made.

Examiner respectfully disagrees.

Examiner has not conceded or demonstrated that the search and examination of these claims in the prior five Office Actions *were made without any serious burden*.

Further, according to MPEP 803, "if the search and examination of an entire application can be made without serious burden, the examiner must examine it on the

Art Unit: 2821

merits, even though it includes claims to independent or distinct inventions.” It does not mean that if the search and examination were made, then serious burden should not be found in the further search and examination of the application and therefore examiner must examine it on the merits as interpreted by applicant.

Moreover, the issue of burden merely plays a minor role for the basis to support the restriction requirement. Since it has been concluded that the pending application includes more than two separate distinctive and independent inventions and species, the restriction is therefore proper.

In particular, it appears that applicant believes the issue of burden only arises from the search of prior art and examination of the application in determining the patentability of the claimed invention. However, applicant is respectfully reminded that conducting a search on application merely plays a small part of examining the invention. Burden may also arise from prosecuting multiple inventions and species in a single application. Such a type prosecution merely leads to complication in patentability determination that may ultimately sacrifices the quality of patentability determination. In view of this reason, a restriction imposed is clearly proper.

The requirement is still deemed proper and is therefore made **FINAL**.

#### **Remarks**

Elected Claims 1, 2, 15, 16, 17, 18, 19-21, 22-26, 68, 72, 74-76 are now in examination. Further, claims 51-54, 56, 57, 58-60 and 73 are also in examination.

### **Claim Rejections – 35 U.S.C. 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 15-26, 51-54, 56-60, 68, 73, 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Havel (5,283,517).

Regarding Claim 1, Havel discloses a method comprising acts of:

- providing an LED system (See Col. 8, lines 35-49) to generate light of a range of colors within color spectrum (See Col. 2, lines 22-27);
- generating the light (from LEDs) so as to illuminate the display (e.g. transparent cover that covers over LEDs) (See Col. 32, lines 46, 58, 61).

As discussed above, Havel essentially discloses the claimed invention but fails to disclose the display being used as retail display, and observer sees the light indirectly via the display. However, the usages of Havel's display in retail use, the usages of observer in seeing the light from different angle or direction (e.g. indirectly) are considered as intended use. And such suggestion does not change the scope of Havel's invention.

Regarding Claim 2, Havel discloses the method further including an act of providing a processor (168) (See Figure 87) for controlling an amount of electrical current supplied to the LED system (Col. 12, lines 9-50), so that a particular amount of

Art Unit: 2821

current supplied thereto generates light of a corresponding color within the color spectrum (See Col. 2, lines 22-27 and Col. 32, lines 27-63).

Regarding Claim 15, Havel discloses that the act of placing includes positioning the LED system to affect an informational board (See Figures 7, 9, 11, 12) such as showing numbers. As discussed above, Havel essentially discloses the claimed invention but fails to disclose the display being used as retail display. However, the usages of Havel's display in retail use are considered as intended use. And such suggestion does not change the scope of Havel's invention.

Regarding Claim 16, Havel discloses that the informational board is capable of showing numbers (See Figures 7, 9, 11, 12). As discussed above, Havel essentially discloses the claimed invention but fails to disclose the display being used as traffic information signs, silent radios, scoreboards, price boards, and advertisement boards. However, since Havel's invention is capable of showing number, it is also capable of show traffic signs (e.g. speed limit), score, price, advertisement etc as well. The usage of Havel's display in those above uses is considered as intended use. And such suggestion does not change the scope of Havel's invention.

Regarding Claim 17, Havel discloses that the generated light changes color over time controlled by the color memory (See Col. 32, lines 27-49).

Regarding Claim 18, Havel discloses that the generated light maintains a constant color based on the crest factor (See Col. 31, lines 33-54). Besides, Havel discloses a continuous color converter.

Regarding Claim 19, Havel discloses the method comprising an act of varying the color of the generated light over a period of time controlled by the color memory (See Col. 32, lines 27-49) so that the observer perceives a change in color of the display being affected by the generated light (from LEDs). As discussed above, Havel essentially discloses the claimed invention but fails to disclose the display being used as retail display. However, the usages of Havel's display in retail use are considered as intended use. And such suggestion does not change the scope of Havel's invention.

Regarding Claim 20, as discussed above, Havel essentially discloses the claimed invention but fails to literally disclose that the observer perceives an illusion of motion on the display being affected by the generated light. However, since Havel teaches that the color of the display is capable of being changed in sequences at fast rate (See Col. 13, lines 1-6 and Col. 14, lines 40-44). Therefore changes of color would create an illusion of motion (color movement) to observer.

Regarding Claim 21, Havel discloses that his invention is a display sign being capable of showing numbers as an information board (See Figures 7, 9, 11, 12). As discussed above, Havel essentially discloses the claimed invention but fails to disclose the display being used as retail display. However, the usages of Havel's display in retail use are considered as intended use. And such suggestion does not change the scope of Havel's invention.

Regarding Claim 22, as discussed above, Havel essentially discloses the claimed invention but fails to literally disclose that the observer perceives an illusion of motion on the display being affected by the generated light. However, since Havel

Art Unit: 2821

teaches that the color of the display is capable of being changed in sequences at fast rate (See Col. 13, lines 1-6 and Col. 14, lines 40-44). Therefore changes of color would create an illusion of motion (color movement) to observer.

Regarding Claim 23, as discussed above, Havel essentially discloses the claimed invention but fails to disclose that the display is used for advertising purpose. However, the usages of Havel's display in advertising purpose are considered as intended use. And such suggestion does not change the scope of Havel's invention.

Regarding Claim 24, Havel discloses that the generated light changes color over a period of time in a pre-programmed sequence (See Col. 31, line 33 to Col. 32, line 5).

Regarding Claim 25, Havel discloses that the generated light changes color over a period of time in response to external conditions (different quantities) (See Col. 20, line 59 to Col. 21, line 24 and Col. 22, line 63 to Col. 23, line 14).

Regarding Claim 26, Havel discloses that external conditions represent proximity of people (motion, sound) (See Col. 20, line 59 to Col. 21, line 24 and Col. 22, line 63 to Col. 23, line 14).

Regarding Claim 51, Havel discloses a method comprising the acts of:

- providing an LED system (See Col. 8, lines 35-49) that generates light of a range of colors within a color spectrum (See Col. 2, lines 22-27) in response to activation signal (e.g. drive signals) (See Col. 3-38);
- directing the light toward the display (40); and



- controlling the activation signal to vary the range of colors (e.g. red, green, blue) of the light over time, whereby the display is affected with color-changing illumination (See Col. 2, lines 22-27 and Col. 32, lines 27-63).

Regarding Claim 52, Havel discloses that the LED system includes at least one red LED (2), at least one blue LED (4), and at least one green LED (3) (See Col. 7, lines 49-54).

Regarding Claim 53, Havel discloses that the LED system comprises a plurality of LEDs having a plurality of colors (e.g. Red, Green, Blue, etc.), a processor (color control logic circuit 52) that receives inputs (color control logic signals) and controls the activation signal (crest factor) in response to the received inputs (color control logic signals). (See Col. 7, lines 1-38 and Col. 30, lines 36-46).

Regarding Claim 54, Havel discloses that the activation signal includes pulse width modulated signal (See Figure 77, pulse train), an intensity (uniform intensity) of a color of the LED system being response to a duty cycle of the PWM signal (See Col. 19, lines 19-36).

Regarding Claim 56, Havel discloses that the activation signal is controlled in response to a user input (pressure) (See Col. 20, line 59 to Col. 21, line 24 and Col. 22, line 63 to Col. 23, line 14).

Regarding Claim 57, Havel discloses that the activation signal is controlled in response to an external condition (motion) (See Col. 20, line 59 to Col. 21, line 24 and Col. 22, line 63 to Col. 23, line 14).

Regarding Claim 58, Havel discloses the act of providing includes an LED system comprising a plurality of LEDs and an addressable controller (address counter) for controlling light generated by the plurality of LEDs (See Col. 24, lines 51-68).

Regarding Claim 59, Havel discloses the method comprising an act of varying the color of the generated light over a period of time controlled by the color memory (See Col. 32, lines 27-49) so that the observer perceives a change in color of the display being affected by the generated light (from LEDs). As discussed above, Havel essentially discloses the claimed invention but fails to disclose the display being used as retail display. However, the usages of Havel's display in retail use are considered as intended use. And such suggestion does not change the scope of Havel's invention.

Regarding Claim 60, as discussed above, Havel essentially discloses the claimed invention but fails to literally disclose that the observer perceives an illusion of motion on the display being affected by the generated light. However, since Havel teaches that the color of the display is capable of being changed in sequences at fast rate (See Col. 13, lines 1-6 and Col. 14, lines 40-44). Therefore changes of color would create an illusion of motion (color movement) to observer.

Regarding Claim 68, Havel discloses a method comprising the acts of:

- providing an LED system to generate light of a range of colors within a color spectrum;
- generating the light (LEDs) so as to illuminate the display (e.g. transparent cover that covers over LEDs) (See Col. 32, lines 46, 58, 61).

Art Unit: 2821

As discussed above, Havel essentially discloses the invention but fails to disclose projecting the light onto an object such that the observer sees the light substantially indirectly via the object, and using in advertising display. However, usage of projecting the light and using in advertising display are merely intended uses. And such suggestion does not change the scope of Havel's invention. Since Havel is capable of showing numbers in different colors, it is also capable of using the advertising purpose as well such as showing prices or alphabets.

Regarding Claim 73, Havel discloses that the act of providing includes providing an LED system comprising a plurality of LEDs and an addressable controller (address counter) for controlling light generated by the plurality of LEDs (See Col. 24, lines 51-68).

Regarding Claim 74, Havel discloses an illumination method comprising act of:

- providing an LED system to generate light of a range of colors within a color spectrum (See Col. 2, lines 22-27).

As discussed above, Havel essentially discloses the invention but fails to disclose projecting the light onto an object such that the observer sees the light substantially indirectly via the object, and using in advertising display. However, usage of projecting the light and using in advertising display are merely intended uses. And such suggestion does not change the scope of Havel's invention. Since Havel is capable of showing numbers in different colors, it is also capable of using the advertising purpose as well such as showing prices or alphabets.

**Allowable subject matter**

Claims 75 and 76 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art neither discloses nor suggests the step of varying the color of the generated light over a period of time so that an observer perceives a change in color associated with the object being affected by the generated light due to a selective color interaction between the generated light and the object as required by claim 75; and varying the color of the generated light over a period of time so that the observer perceives an illusion of motion in a portion of the object being affected by the generated light due to a selective color interaction between the generated light and the object as required by claim 76.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

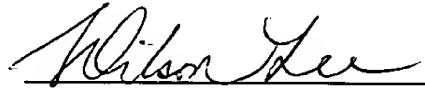
**Correspondence**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wilson Lee whose telephone number is 703-306-3426.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 703-308-4856.

The fax phone numbers for the organization where this application or proceeding is assigned is 703-308-7722 or 703-308-7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

A handwritten signature in cursive script, appearing to read "Wilson Lee", written over a horizontal line.

Wilson Lee  
Patent Examiner  
U.S. Patent & Trademark Office

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10/20/03